Medicine Hat
The Gas City

MEDIA RELEASE

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FOR IMMEDIATE RELEASE
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CITY CHARTS ROADMAP FOR IMPROVING THE ENVIRONMENT

Medicine Hat – A more sustainable Medicine Hat is the destination of a newly released Community Environmental Roadmap.

The City of Medicine Hat unveiled a Community Environmental Roadmap this week which identifies the community's environmental priorities as land/surface, renewable energy, energy conservation, water conservation, water quality, waste and recycling and air quality. The Roadmap also provides key indicators and sets long-term targets for the environmental priorities.

"The Community Environmental Roadmap was developed to provide a focal point for the community's environmental priorities," says Russ Smith, Manager of Environment for the City. "The development of the Roadmap will put the community on the right track to address its environmental priorities and help ensure a more sustainable community for all Medicine Hatters."

The Roadmap provides tips and suggestions about what residents can do, such as:

- install low flow showerheads
- choose recyclable products and recycling them
- purchase ENERGY STAR products
- reduce vehicle idling
- support local renewable energy projects

The Roadmap journey started in 2005 with a series of open house community meetings about the environment.

An ad hoc advisory committee was appointed in 2006 to work with City staff to bring the environmental priorities to life by developing performance measures and targets for the community to achieve. The committee was made up of the Grassland Naturalists, Medicine Hat Chamber of Commerce, Medicine Hat College, Medicine Hat Industrial Group, Palliser Airshed Society, Palliser Health Region, and Urban Environmental and Recreation Advisory Board.

"Over a 12 month period this dedicated group of volunteers provided thoughtful feedback on how to best track and measure the community's progress on its environmental priorities," adds Smith. "This Roadmap represents the beginning of a journey that will see bi-annual reporting so the community can track its progress."

As part of its commitment to the environment, the City of Medicine Hat launched HAT Smart in 2007. HAT Smart promotes a wide variety of services and programs to help residents improve the environment. HAT Smart is also a way to learn about what the City is doing to preserve and improve the environment. Information about HAT Smart environmental initiatives is available at www.hatsmart.ca

- more -

The Community Environmental Roadmap is available on the City's website www.medicinehat.ca and its environmental initiatives site www.hatsmart.ca.

ROADMAP HIGHLIGHTS

Environmental Priority	Indicator	Target
Land / Surface	Community Perception[1] of: • Wise City Planning • Physically Attractive Community	• Wise Planning – 75% • Attractive Community – 85%
Renewable Energy	Residential energy from renewable sources	Increase to 25% by 2025
Energy Conservation	Reduction of residential energy consumption	Reduce by 20% by 2020
Water Conservation	Reduction of residential water consumption	Reduce by 15% by 2020
Water Quality	• Local water quality testing • Perceived water quality	• Meet guidelines – 100% • Perceived quality – 100%
Waste and Recycling	Reduce residential waste to landfill	Reduce to 500kg per capita
Air Quality	Air Quality Health Index	• Low risk rating – 100%

[1] based on a annual Quality of Life survey

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COMMUNITY ENVIRONMENTAL ROADMAP

Message from the City of Medicine Hat's Environment Department

The City of Medicine Hat is committed to providing environmental leadership and tracking the community's progress on its environmental priorities. The Community Environmental Roadmap provides a framework to better understand the community's environmental priorities, including performance indicators and long-term targets.

The Roadmap is the product of a journey that started in late 2005 with a series of stakeholder meetings about the environment. Those meetings provided the foundation for the Community Environmental Priorities that were adopted by City Council in June 2006.

Key Environmental Areas	Community Environmental Priorities
Land / Surface	Planning Standards, Building Standards, Natural Areas, Transportation
Energy	Renewable Energy, Conservation, Education, Civic Leadership, Incentives
Water	Conservation, Water Quality, Education
Waste and Recycling	Education, Incentives / Programs
Air	Civic Leadership, Vehicle Emissions

An Ad Hoc Advisory Committee was appointed in 2006 to work with City staff to bring the environmental priorities to life by developing performance measures and targets for the community to strive towards. The committee consisted of a diverse group of stakeholders that included: Grassland Naturalists, Medicine Hat Chamber of Commerce, Medicine Hat College, Medicine Hat Industrial Group, Palliser Airshed Society, Palliser Health Region, and Urban Environmental and Recreation Advisory Board. Over a 12 month period this dedicated group of volunteers provided thoughtful feedback on how to best track the community's progress in relation to their environmental priorities.

This Roadmap represents the beginning of a journey that will see reporting every two years, enabling the community to track its environmental progress against the targets set out in the Roadmap.

Russell Smith
Environment Manager
January 2008

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ROADMAP HIGHLIGHTS

The Roadmap consists of performance indicators and targets for each of the environmental priorities. Environmental performance indicators are measurements that reflect the state of the priority over time. Targets indicate what the community hopes to achieve over time. To begin the journey, 2006 baseline figures will be used. The performance indicators will be evaluated against the baseline figures.

NOTE: The conservation baseline and target figures (water / energy) in the report are intended to be based on a 5 year average to compensation for the impact of annual weather variations on consumption.

Land / Surface

Indicator:	Community perception that the City manages growth through wise residential and commercial planning
	A physically attractive, clean community
Baseline:	38 per cent of Quality of Life survey respondents indicate they feel the City manages growth through wise residential and commercial planning
Target:	75 per cent of Quality of Life survey respondents indicate that they feel the City manages growth through wise residential and commercial planning
	95 per cent of respondents think Medicine Hat is a physically attractive, clean community

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Renewable Energy

Indicator:	Percentage of residential energy from renewable sources
Baseline:	No renewable energy sources
Target:	25 per cent of residential energy provided from renewable sources by 2025

Energy Conservation

Indicator:	Per capita residential natural gas and electricity consumption
Baseline:	Average Electric consumption per year 8,000 kilowatt hours (kWh) per household
	Average Gas consumption per year 124 gigajoules (GJs) per household
Target:	20 per cent reduction in residential natural gas and electricity consumption by 2020

Water Conservation

Indicator:	Residential water consumption per household per year
Baseline:	Average water consumption per year 325 cubic metres (cu metres) per household
Target:	Reduce average annual residential consumption by 15 per cent per household by 2020

Water Quality

Indicators:	Local water quality testing based on provincial water, waste water and storm water guidelines
	Perceived quality of drinking water
Baseline:	Local water quality testing currently meets or exceeds provincial drinking water, waste water and storm water guidelines
	75 per cent of the 2007 Quality of Life survey respondents indicated that they felt the City has high quality drinking water
Target:	Local water quality testing meets or exceeds Provincial water, waste water and storm water guidelines 100 per cent of the time
	100 per cent of Quality of Life survey respondents indicate that they feel the City has high quality drinking water

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Waste and Recycling

Indicator:	Residential waste to landfill
Baseline:	750 kilograms (kg) per capita per year
Target:	Reduce residential waste to the landfill to 500 kg per capita by 2015

Air Quality

Indicator:	Air Quality Health Index
Baseline:	97 per cent Low Health Risk
Target:	Achieve Air Quality Health Index Rating of Low Health Risk, 100 per cent of the time

COMMUNITY ENVIRONMENTAL PRIORITY

LAND / SURFACE

INDICATOR
Community perception that the City manages growth through wise residential and commercial planning

A physically attractive, clean community

What Is The Issue?
As land is developed within the City we must balance this growth and the required supporting infrastructure with maintaining our quality of life and protecting the environment. Every development activity results in some form of environmental impact. How do we determine what are acceptable impacts and what are not?

There is significant biological diversity within our community including many environmentally significant geographic areas. Native prairie grasslands, river valleys and coulees provide travel corridors and habitat for many wildlife species. There are several endangered plants and animals, such as the Tiny Cryptanthe plant, which has been found in the Ranchlands area currently under development.

The process of extracting water from the South Saskatchewan River and returning treated water to the river can have an impact on the vegetation and wildlife in the river and river valley. In fact, all development activities have an impact on vegetation and wildlife.

The city's transportation infrastructure is currently designed to support the traditional transportation requirements of the community. Personal vehicles (cars and truck) are the dominant mode of transportation in Medicine Hat. Over time, as fuel prices increase and individuals become more aware of the environmental impact of fossil fuel consumption, people will start to look for alternative forms of transportation. The required infrastructure will shift away from personal vehicles towards low impact transportation such as cycling and public transit.

What Has Been Done

- In 2004, the City adopted a revised Municipal Development Plan (MDP) and Roadway System Master Plan (RSMP) with public input, setting out future policy direction to guide development and manage growth.
- An Environmental Impact Assessment process for land development has been included in the City's Land Use Bylaw for a number of years. The initiation of an assessment process is at the discretion of the City's planners.
- The Land Use Bylaw also allows the City's Planning Department to require developers to protect significant natural features and create buffers to protect environmentally sensitive areas.
- A 1991 natural areas study mapped geographic areas deemed environmentally significant. The City has completed a review of the 1991 Sensitive Areas Evaluation and developed a vegetation and wildlife inventory.
- The City uses pesticides (herbicides and insecticides) according to Integrated Pest Management practices. These practices focus on plant health and monitoring for

pests, and when pests reach threshold tolerance levels, treatment takes place.
- The City provides a bus Transit Service throughout the community six days a week as well as Special Transit for people with disabilities.
- The City has a recreation path system throughout the community consisting of more than 90 kilometres of paved and shale paths.

What The Data Tells Us

- Medicine Hat is fortunate to enjoy extensive topographical features, rivers, shorelines and functional ecological zones.
- Medicine Hat continues to attract newcomers; a conservative population growth rate over the next two decades is 1.2 per cent.
- Canadian Pacific Railway (CP Rail) serves Medicine Hat from its main line. CP Rail uses intermodal transportation systems that combine the benefits of rail and truck.
- Medicine Hat has a network of trucking firms offering local, provincial, national and international intermodal freight services. These trucking firms provide services to the Calgary International Airport and to Pacific ports in Vancouver, Seattle and Tacoma, as well as other connections across Canada and the United States.
- As Medicine Hat does not have a concentrated downtown workforce like many larger cities, extensive public transit may be an unrealistic expectation.

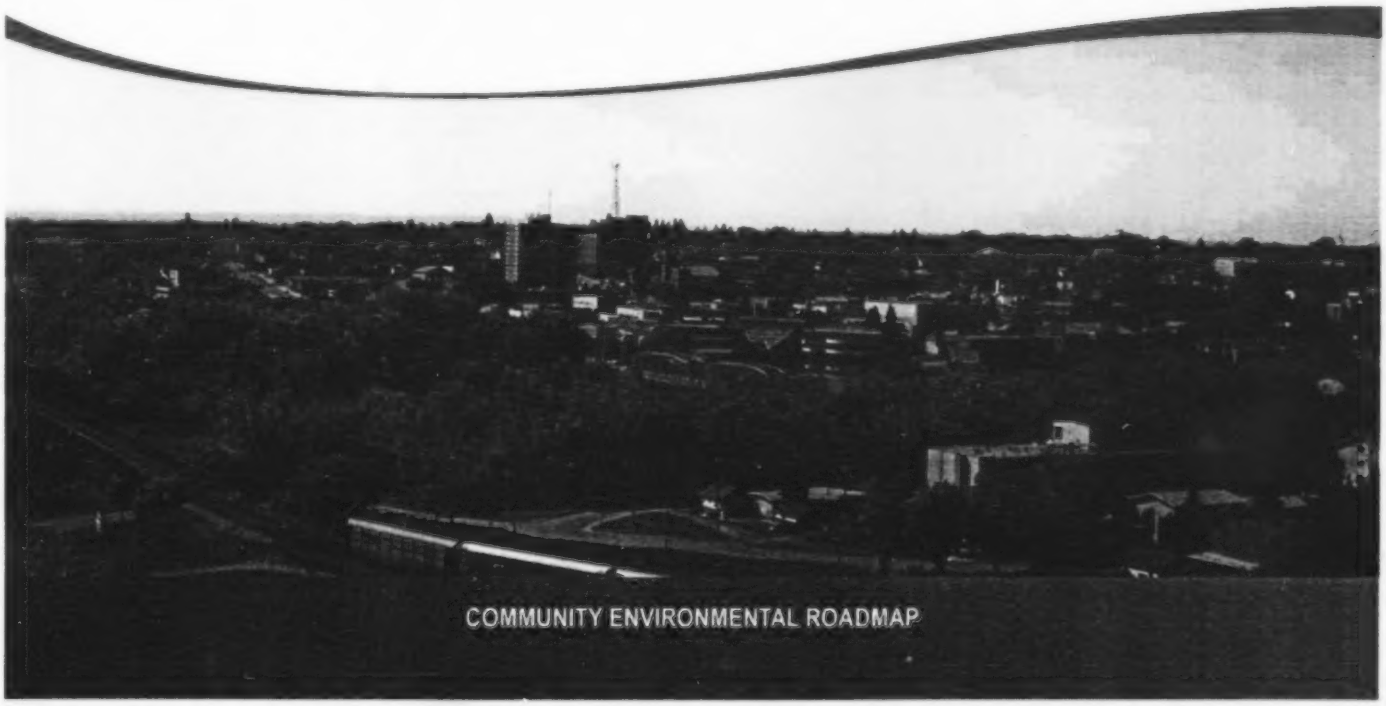
What Can We Do?

- Consider the environmental impact of any development activity.
- Value the biodiversity of our community.

TARGET

75 per cent of Quality of Life survey respondents indicate they feel the City manages growth through wise residential and commercial planning

88 per cent of respondents think Medicine Hat is a physically attractive, clean community



COMMUNITY ENVIRONMENTAL PRIORITY

RENEWABLE ENERGY

INDICATOR
Percentage of residential energy from renewable sources

What Is The Issue?

Medicine Hat is currently self-sufficient in producing energy for residents and local businesses. The energy needs are almost exclusively met by natural gas as the City produces and distributes natural gas and generates electricity, using natural gas as fuel.

The City acquired mineral rights for local gas production and developed natural gas and electric utilities in the early 1900s. The City's electric plant uses natural gas as fuel. The City's Gas and Electric Utility operations are subject to increasingly complex and stringent environmental regulations and industry best practices.

Historically, the ownership of gas resources has contributed to the community's high quality of life. Medicine Hat residents and businesses enjoy among the lowest energy prices and property taxes in the country. Gas production profits also provide capital funding for City projects such as the Family Leisure Centre and Esplanade.

Natural gas is a non-renewable resource. Because of market conditions, the City is challenged to replace the gas it produces with new reserves. The City was successful in late 2006 with a shallow gas reserve purchase of 66 billion cubic feet (BCF). However, as reserves decline the City will need to begin purchasing gas on the market for its electric plant operations.

The above scenario will play out if the City continues down the same path without making any changes. Fortunately, there is time to consider options and to make different choices. While those choices involve financial and energy sourcing decisions, environmental considerations also play a role.

Renewable energy for the City could involve other sources, such as hydro, wind and solar power, biomass and other emerging technologies. They provide an opportunity for the City to reduce its dependence on natural gas for energy as well as to reduce greenhouse gas emissions. Renewable energy is created from sources that will not eventually become depleted. While renewable energy sources usually offer environmental benefits, they also create environmental impacts that must be considered. In addition, they are usually higher cost than fossil-fuel based energy sources, although these costs are becoming lower with ongoing commercial development.

What Has Been Done

In 2004, the City entered into an agreement with Vision Quest, Canada's largest wind energy generator, to produce and deliver 13,050 megawatt hours of wind power annually to Alberta's electricity grid. This initiative is a first step in diversifying the City's energy portfolio. In addition, Medicine Hat has access to this environmentally friendly energy source through its electric energy imports from the grid.

The City has approved $1.0 million in funding to evaluate renewable energy projects, subject to matching grant funding

from other levels of government. A number of projects are being considered for evaluation, including solar energy projects, the potential for local wind generation and the use of water in an aquifer beneath the city for cooling and heating residential and commercial buildings. The City is also preparing to allow "net billing" for small distributed generation (wind / solar), allowing home owners to produce their own electricity to offset the energy charges on their Utility Statement.

What The Data Tells Us

Ninety six per cent of residential energy used in Medicine Hat is derived from natural gas, and natural gas is a non-renewable resource. Average per capita residential energy use:

- electric use is 3.5 megawatt hours per year
- natural gas use is 44 gigajoules per year

The most cost effective way of reducing reliance on non-renewable resources is energy conservation. The City's Alternative Energy Review determined several renewable energy alternatives that have local potential, including:

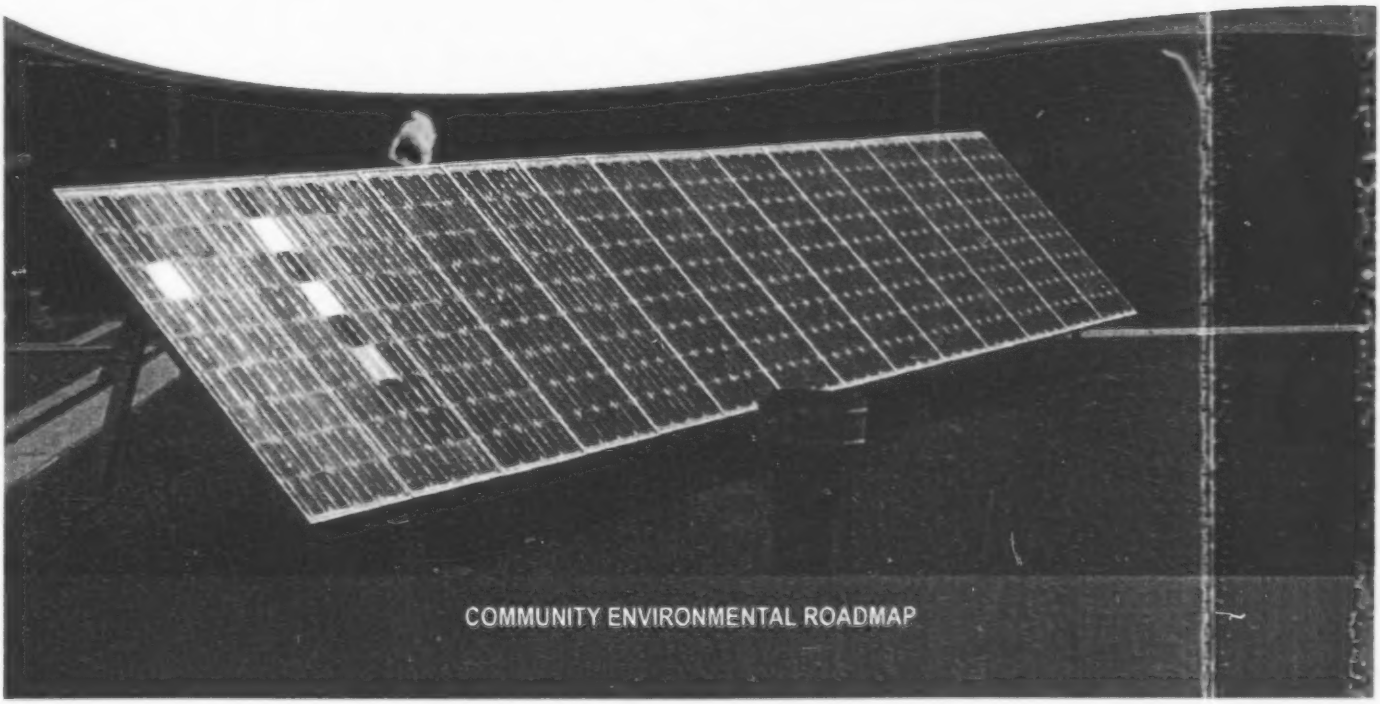
- Thermal renewables – Solar and Geothermal
- Electric renewables – Wind and Solar

What Can We Do?

- Support renewable energy projects in our community.
- Install a renewable energy system on your home (solar water heating, solar electric, micro wind).
- Conserve energy to decrease fossil fuel consumption and increase the percentage of renewable energy being used to supply residential energy needs.

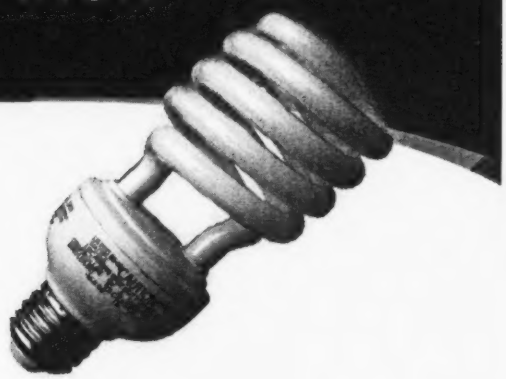
TARGET

25 per cent of residential energy provided from renewable sources by 2025



COMMUNITY ENVIRONMENTAL PRIORITY

ENERGY CONSERVATION



INDICATOR
Per capita residential natural gas and electricity consumption

What Is The Issue?

Conserving energy and improving efficiency is not only good for the environment but reducing greenhouse gas emissions can help extend the life of non-renewable resources such as natural gas.

The City of Medicine Hat's Energy Division utilities provide service using natural gas, a non-renewable resource. Over the past several years, consumers of the utilities have been experiencing increased utility costs as the City moves closer to pricing the energy commodity (natural gas and electricity) to reflect market conditions. Market pricing also encourages consumers to conserve energy in order to reduce their monthly Utility Statements.

Energy conservation can be approached through lifestyle changes or technology applications. Lifestyle conservation efforts are generally achieved through education and a change in consumer behaviour. An example of a lifestyle change would be turning down a furnace thermostat and wearing a sweater.

Technology applications can reduce consumption through the purchase of energy efficient equipment. Conservation can result from small purchases, such as a programmable thermostat, or large purchases like the installation of a high efficiency furnace. Conservation through technology typically does not require a change to the consumer's lifestyle.

What Has Been Done

- To encourage the wise use of energy, the City of Medicine Hat introduced an Energy Conservation Charge on customer Utility Statements. Electric customers who use over 950 kWh's in a billing period incur a conservation premium for each kilowatt hour over 950 kWh. Natural gas customers incur additional charges for consumption over 22 gigajoules in a billing period.
- The City hired an Energy Conservation Coordinator in 2007 to assist and educate consumers on ways to reduce their energy consumption. One of the mandates for the Energy Conservation Coordinator is to produce educational materials outlining ways consumers can save on their Utility Statements.
- One Change, in partnership with funding from Encana, Alberta Energy and the City of Medicine Hat, launched Project Porchlight in Alberta. Project Porchlight's mandate is to deliver energy efficient light bulbs to every home in the Medicine Hat service area. The focus is to promote environmentally responsible change one bulb at a time.

What The Data Tells Us

- Energy consumption for a typical household can be broken down as:
  - Natural Gas – average annual consumption is 124 GJs
    - 80 per cent furnace
    - 20 per cent hot water heating

- Electricity – average annual consumption is 8,000 kWh
  - 20 per cent furnace fan / air conditioner
  - 15 per cent refrigerator
  - 15 per cent kitchen appliances
  - 25 per cent lighting
  - 15 per cent laundry
  - 10 per cent miscellaneous electronic equipment
- The use of energy efficient appliances, recognized through the ENERGY STAR* product line, offer significant energy savings to consumers.
- Education is the key to consumers making lifestyle and technology changes to their energy consumption.
- Eliminating a second or older inefficient refrigerator can save households up to 600 kWh of electricity per year. For Medicine Hat consumers this amounts to approximately $47 in annual savings.
- By switching to energy efficient or compact fluorescent light bulbs, households can save up to $50 per year.
- The purchase of an energy efficient front loading clothes washing machine, with a switch to cold water washing, has an impact on energy savings in three areas:
  - no need to use natural gas to heat washing water
  - less water used in the wash cycle, and
  - a reduction in electricity costs from the dryer as clothes are spun efficiently to remove most of the water from the rinse cycle.

What Can We Do?

Energy consumers can influence electric and natural gas consumption through a change in lifestyle (habits) or the installation/purchase of energy efficient household appliances and equipment.

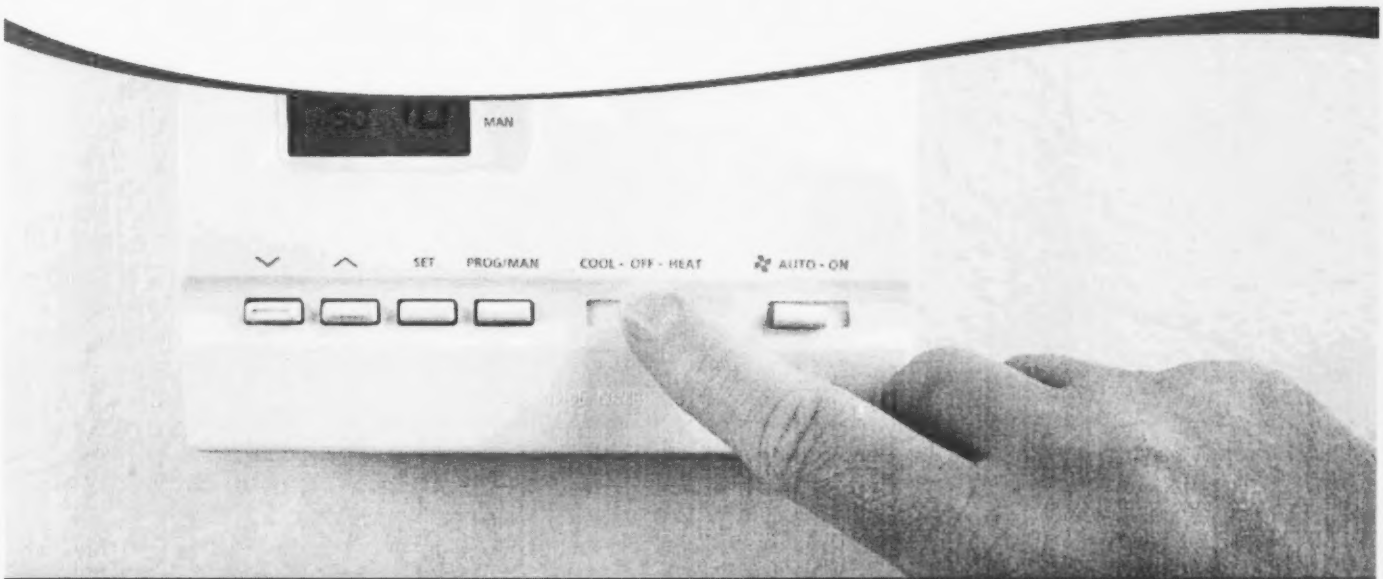
While a home may have an energy efficient air conditioner installed, further conservation can be achieved by setting the thermostat no lower than 25°C or five degrees lower than the outside temperature once the temperature exceeds 30°C.

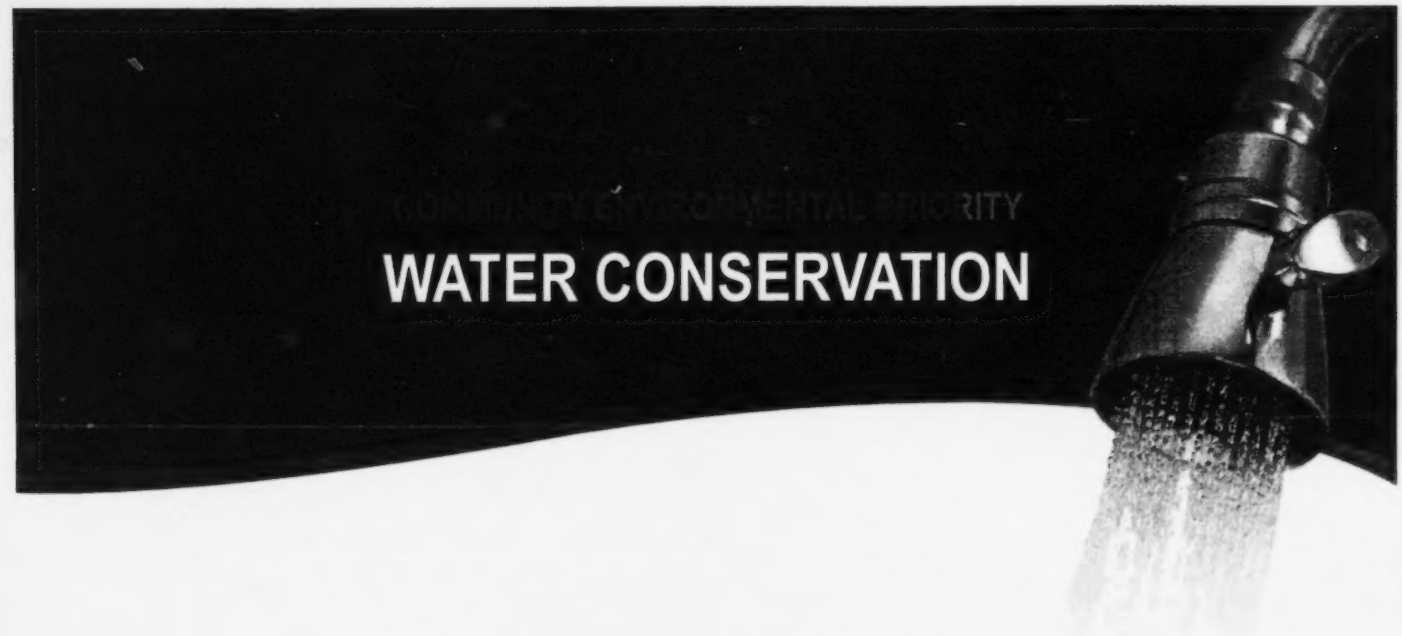
Switching to energy efficient products such as compact fluorescent light bulbs, programmable thermostats, and low flow showerheads, are low cost solutions to reducing energy consumption. These products are low value investments, with a significant rate of return.

New buildings can be designed and built to green standards, such as Built Green or L.E.E.D. (Leadership in Energy and Environmental Design), and be equipped with energy efficiency technology.

TARGET

20 per cent reduction in residential natural gas and electricity consumption by 2020





WATER CONSERVATION

INDICATOR
Residential water consumption per household per year

What is the Issue?
Water is a basic necessity of life; it is not only essential for our survival, but it contributes immeasurably to the quality of our lives. The way we use water, the amount we use, and our methods of conserving it are very important for the sustainability of this resource.

Canadians are also among the highest per capita water users in the world. High water use results in many different impacts, such as high costs for supplying drinking water, treating waste water, and maintaining or upgrading infrastructure and changes in water levels and water quality, which have direct impacts on aquatic ecosystems, biodiversity, human health, and water shortages.

Reduced local water use decreases the need for increasing the capacity of water treatment infrastructure and lowers the energy needed to build and operate the infrastructure. Reduced municipal water use also renders waste water treatment more efficient and reduces the need to increase the capacity of waste water treatment infrastructure.

What Is Being Done

- The Government of Alberta is making significant progress in implementing Water for Life: Alberta's Strategy for Sustainability. Actions undertaken include:
  - Forming the Alberta Water Council;
  - Developing Watershed Planning and Advisory Councils along with Watershed Stewardship Groups, which will make recommendations to government, stakeholders and the public on improving water management throughout Alberta's watersheds; and,
  - Enhancing water monitoring programs, reviewing water storage sites, examining protocols to reduce the amount of fresh water used in oilfield injection, and developing the Alberta Water Information Centre and water use reporting system.
- All Medicine Hat municipal water customers currently require water meters.
- Overall water capacity will be increased in coming years by expanding the capacity and upgrading operations at the City's Water Treatment Plant.
- The City's Parks and Outdoor Recreation Department is continuing to embrace and implement the seven Xeriscape principles new park developments, is continually assessing irrigation water requirements is continuing with irrigation systems infrastructure audits and pursing budgetary support for redevelopment of inefficient and aging systems.
- Develop and implement education and information programs to promote and support water efficiency, example: Xeriscape Garden.
- Work together with local watershed-based committees to monitor water quality and quantity concerns and to co-ordinate necessary action.

What The Data Tells Us

- The City of Medicine Hat's Water Treatment Plant meets or exceeds the provincial water quality requirements in its operating licence.

- Water Treatment Plant production ranges from 30,000 cubic metres per day in the winter months to 130,000 cubic metres per day in the summer months.

- Almost half of residential water is used for irrigation or non-household use, such as car washing.

- Water use in the home can be broken down as such:
  - Showers and baths 35 per cent
  - Toilet flushing 30 per cent
  - Laundry 20 per cent
  - Kitchen and drinking 10 per cent
  - Cleaning 5 per cent

  These figures do not include seasonal outdoor water uses, such as watering lawns and gardens that can increase daily domestic use by up to 50 per cent.

- Residential water use is highly dependent on personal habits. For example, by installing water efficient appli¬ances indoor water consumption can be reduced by as much as 30 per cent.

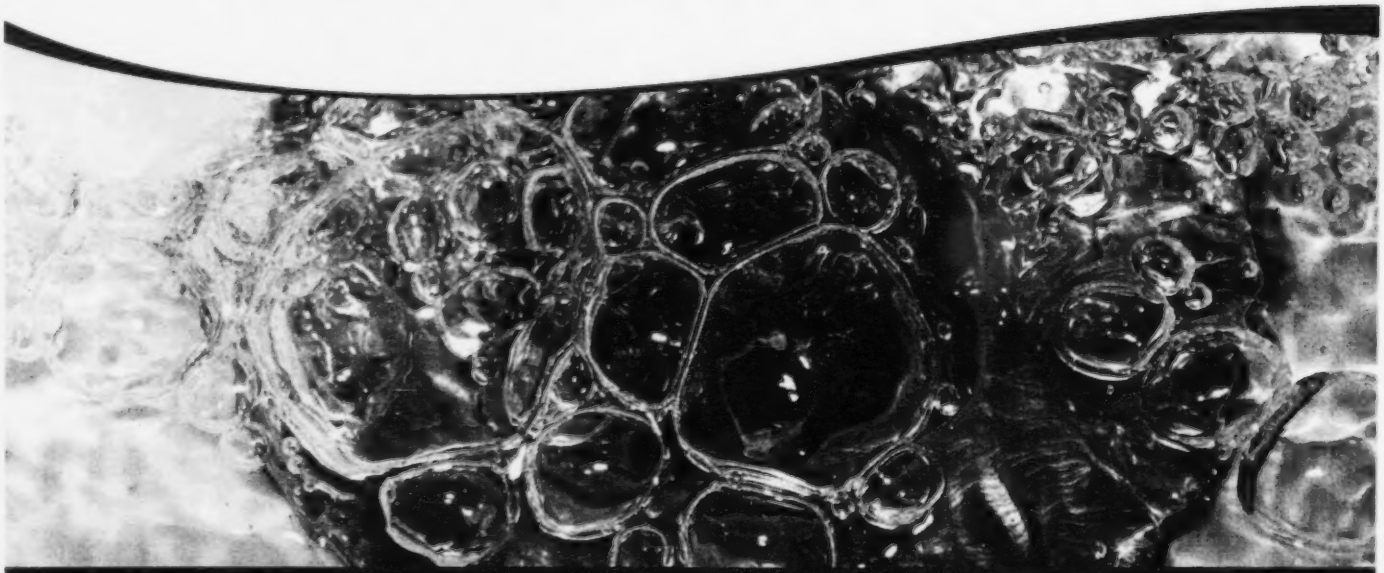
What Can We Do?

Simple water efficiency measures can reduce water use and add up to major savings. Some of these measures are:

- Toilet Retrofit
- Showerheads and Aerators
- Water Efficient Appliances
- Irrigation Audit
- Landscaping Practices

TARGET

Reduce average annual residential consumption by 15 per cent per household by 2020



WATER QUALITY

INDICATOR

Local water quality testing based on provincial water, waste water and storm water guidelines

Perceived quality of drinking water

What Is The Issue?

Alberta has legal responsibilities to our downstream neighbours to ensure that water is shared and delivered in the streams that cross inter-provincial and international boundaries.

There are two major factors that affect the daily, monthly, and yearly differences in stream flow, water levels and groundwater elevations:

1. Seasonal variations
2. Changes due to human activity and developments.

The climate and landscapes of Alberta have a significant influence on natural water quality conditions. Factors such as vegetation, geology and hydrology cause surface water quality to vary extensively. Human activities affect the quality of our water. Agricultural irrigation has a significant impact because dams created to store water remove the spring runoff from the river which reduces the natural cleansing cycle. The greatest impacts are associated with the disposal of treated waste water. Significant and ongoing improvements to waste treatment technology have reduced the impact in recent years.

Water quality is also affected indirectly by activities on the land. Rain and snowmelt can move materials from the land surface into adjacent watercourses. Therefore, activities such as urban development within a drainage basin can have an impact on water quality.

What Has Been Done

- The Federal Government is putting measures in place to prevent the release of toxic substances in municipal waste water that is released. It is partnering with the provinces, territories and municipalities to strengthen national water quality guidelines, monitor water quality, and research ways to prevent pollution and reduce its impact on our water.

- *Water for Life: Alberta's Strategy for Sustainability* is based on the following commitments to Albertans:
  - Albertans are assured their drinking water is safe.
  - Albertans are assured that the province's aquatic environments are maintained and protected.
  - Albertans are assured that water is managed effectively to support sustainable economic development.

- The City of Medicine Hat is upgrading the Waste Water Treatment Plant (ultra-violet disinfection) as a result of changing regulations to improve treatment quality.

- Newer developments in the city require storm water management facilities or storm water ponds to collect and

slow the storm water to allow sediments to deposit before being released to local watercourses. This prevents all the water from reaching the river at the same time and decreases river flood levels while preventing pollution.

What The Data Tells Us

- Alberta Environment regularly tests river water quality on a number of rivers and streams across the province, and all data is archived into a Water Database System.
- The City of Medicine Hat's Waste Water Treatment Plant meets or exceeds effluent quality requirements.
- Although improvements have been made in Alberta's sewage treatment for municipal areas, source control regulations are vital to curb pollutants entering surface waters from storm sewers.

What Can We Do?

Protect and improve surface water quality by improving the quality of storm water run-off provide education and promote the appropriate use of these systems.

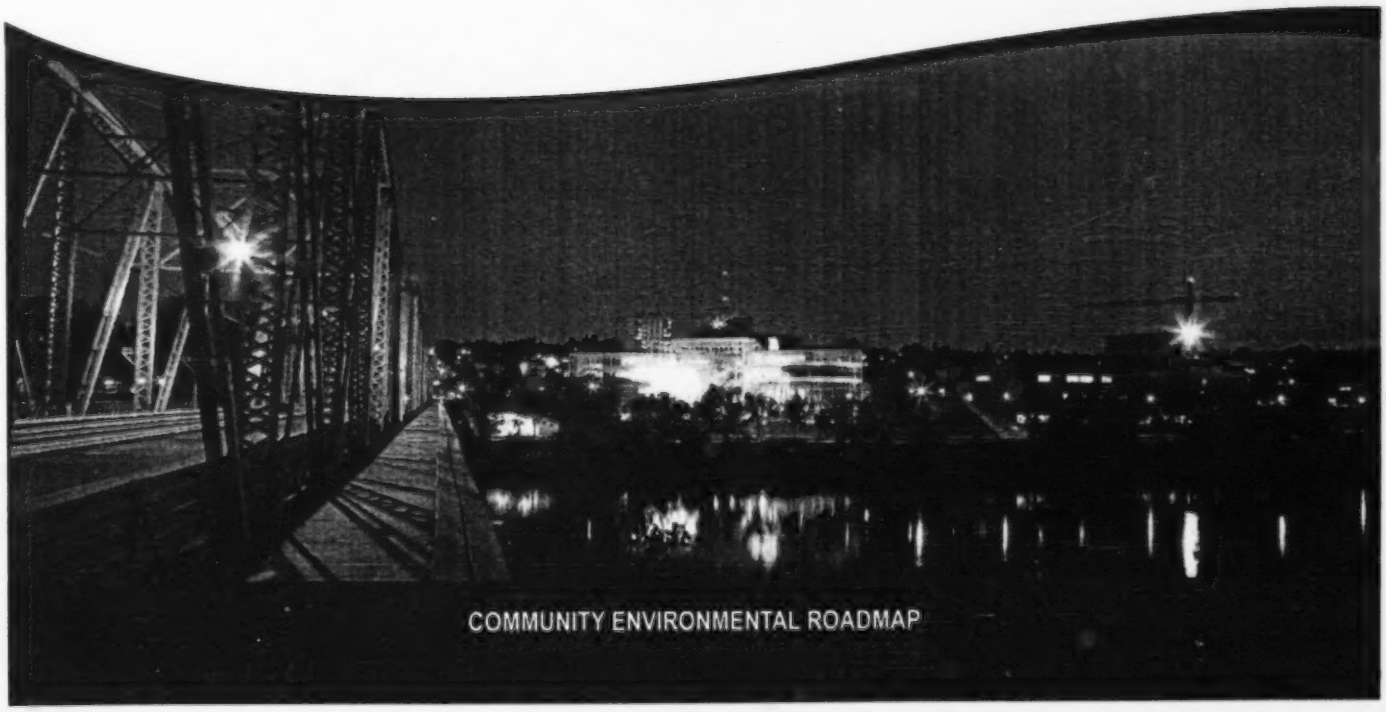
We can all play a part in improving the quality of water in Medicine Hat:

- Prudently use fertilizers and pesticides
- By conserving water, less sewage is treated
- Use phosphorus-free laundry detergents
- Do not pour grease and fat down house drains. Instead, dispose of them in the garbage.
- Limit use of salt to de-ice roads and walkways
- Participate in local watershed management groups to increase awareness in water quality issues and monitor improvements in local rivers and streams.

TARGET

Local water quality testing meets or exceeds Provincial water, waste water and storm water guidelines 100 per cent of the time

100 per cent of Quality of Life survey respondents indicate that they feel the City has high quality drinking water



COMMUNITY ENVIRONMENTAL PRIORITY

WASTE AND RECYCLING

INDICATOR
Residential waste to landfill

What Is The Issue?
The amount of solid waste (garbage) we generate includes wastes disposed in landfills plus wastes diverted for recycling and reuse. The generation and management of solid waste raise important environmental, economic and social issues. The benefits of reducing waste include conserving natural resources and energy. Solid waste can pollute land, air, and water. Reducing waste extends the life of a landfill.

What Has Been Done

- Alberta has established a goal to decrease the amount of material sent to landfills from 800 kg per person to 500 kg per person by the year 2010.

- In October 2004, the Province announced a new recycling program for electronics. Through this program, an environmental fee is collected when electronics are purchased. The revenue from the environmental fee covers the cost of collecting and recycling the electronics at the end of their lives.

- The City uses an integrated approach to solid waste management that includes waste collection, waste reduction, waste diversion, and landfill.

- At the City's landfill, materials such as recyclable cardboard, electronics, batteries, metals, wood, tires, concrete, and yard and garden waste are separated and processed for reuse. These efforts help reduce the amount of waste buried.

- The City produces SURE GROW compost from clean yard waste materials such as grass clippings, leaves, and tree and shrub trimmings. SURE GROW is produced in accordance with industry and regulatory standards.

- The City's Solid Waste Utility is reviewing its current waste management programs, including projections of waste generation and diversion opportunities over the next five years. The results, along with a clear understanding of the community's values, will help determine a waste diversion policy and strategy.

What The Data Tells Us

- The City's drop-off recycling depot started in 1997. The City accepts paper, cardboard, newsprint, plastics, tin and glass products. From 1998 to 2006, the Material Recovery Facility (MRF) had a 340 per cent increase, indicating a positive community response to recycling.

- The City's goal of reducing the annual amount of solid waste in the landfill by 50 per cent was achieved by the end of 2005. This was accomplished through biosolids composting, residential and commercial recycling, and yard waste composting.

- Residential depots have seen an increase in kilogram per capita per year from 2004 to 2006 of nine per cent. The MRF has seen an increase in commercial materials from

2004 to 2006 of 18 per cent. The residential garbage (kg) per capita per year has decreased six per cent. These three numbers mean more recycling is occurring.

- The City continues to expand its solid waste education program. For the past several years, every residence has received a Solid Waste Guide and a multipage calendar, which includes extensive information on solid waste services and recycling opportunities. The City also supports school education programs with material and teacher support. In addition, the City provides extensive solid waste information on the City's website www.medicinehat.ca.

What Can We Do?

Reducing the amount of waste we produce is the most effective way to decrease waste generated.

REDUCE

- Reduce the amount of unnecessary packaging.
- Reduce toxic waste by purchasing paints, pesticides and other hazardous materials only in the quantities needed, or by sharing leftovers, or use an environmentally friendly alternative.

REUSE

- Consider reusable products.
- Maintain and repair durable products.
- Reuse bags, containers, and other items.
- Borrow, rent, or share items used infrequently.
- Sell or donate goods instead of throwing them out.

RECYCLE

- Choose recyclable products and containers and recycle them.
- Select products made from recycled materials.
- Compost yard trimmings and some food scraps.

RESPOND

- Educate others on waste reduction and recycling practices.
- Be creative - find new ways to reduce waste quantity and toxicity.
- Chose goods from the EcoLogo certified products listing.

TARGET

Reduce residential waste to the landfill to 500 kg per capita by 2015

AIR QUALITY

INDICATOR
Air Quality Health Index

What Is The Issue?

Air quality is a measure of air cleanliness. Substances such as carbon monoxide, ozone, sulphur dioxide, nitrogen oxides, hydrogen sulphide and others are considered to be air pollutants when their concentration in the air is high enough to cause adverse effects. A number of natural and man made sources release these substances and others into the air. When air pollutants accumulate in the atmosphere, air quality is reduced and our health and the health of ecosystems can be affected.

An Air Quality Health Index is a communication tool to help support personal health protection through education. An Air Quality Health Index uses results from studies and data to measure the risk from multiple pollutants. The levels of risk are reported as low, moderate, high or very high for a 24 hour period. This reporting enables individuals to decide how they might be at risk. In addition, it provides health messaging to tell Canadians, both general and at risk populations, how to minimize their risk.

In general, the air quality in the Medicine Hat area is good. For the past several years, Medicine Hat has consistently measured 96 per cent or better in the "Low Health Risk" level. Specific events, such as the 2004 forest fires in British Columbia, can impact the quality of air in the Medicine Hat area. These incidences are generally short in duration.

What Has Been Done

- Alberta Environment has established air quality objectives for over 40 substances. It is continually adding new substances and modifying existing objectives.
- Much of the Province's air quality management work is undertaken by the Clean Air Strategic Alliance (CASA), a non-profit consensus based association of senior representatives from government, industry and non-government organizations (including health and environmental groups).
- Through CASA, a number of air shed zones have been established. These zones monitor air quality in the region. The City participates in the Palliser Airshed Society (PAS).
  - The PAS network consists of one continuous monitoring station and six passive monitoring sites.
  - The continuous site provides real time data for nitrogen dioxide, ozone, carbon monoxide, total hydrocarbons, fine particulate matter, as well as meteorological data.
  - PAS recently started reporting a daily Air Quality Index which provides the public with a measure of outdoor air quality.
- Environment Canada's introduction of the Action Plan to Reduce Greenhouse Gases and Air Pollution will:
  - Impose mandatory targets on industry to achieve a goal of an absolute reduction of 150 megatonnes in greenhouse gas emissions by 2020.
  - Impose targets on industry so that air pollution from industry is cut in half by 2015.
  - Regulate the fuel efficiency of cars and light duty trucks, beginning with the 2011 model year.

- Strengthen energy efficiency standards for a number of energy using products, including light bulbs.
- The City's new electric generation equipment has reduced nitrous oxide (NOx) and carbon dioxide (CO2) emissions by 35 and 6 per cent respectively.
- The City launched the Going Green Program in April 2004. Going Green's support of wind energy production will eliminate 13,000 tonnes of green house gas emissions each year - the equivalent annual emissions of 2,725 cars.

What The Data Tells Us

- Green house gases occur naturally as well as when fossil fuels are burned.
- Major greenhouse gas sources in the Medicine Hat region are industries that use natural gas.
- Air pollution comes from both local sources (ie: vehicles, industry) and from far away, carried over hundreds of kilometres.
- Even moderate levels of air pollution can have a negative effect on the health of vulnerable people, such as those with cardio-respiratory problems.
- Air pollution affects everyone's health in different ways, ranging from minor symptoms, such as throat irritation to impaired breathing and heart problems. Negative health effects will increase as air pollution increases.
- Children inhale more pollution per kilogram of body weight than adults.
- People with breathing or heart problems should always pay attention to symptoms, even at low index levels.
- Riding a bike, walking or rollerblading to work is healthy and keeps the air clean.
- A full public transit bus is equivalent to taking 40 to 60 cars off the road.

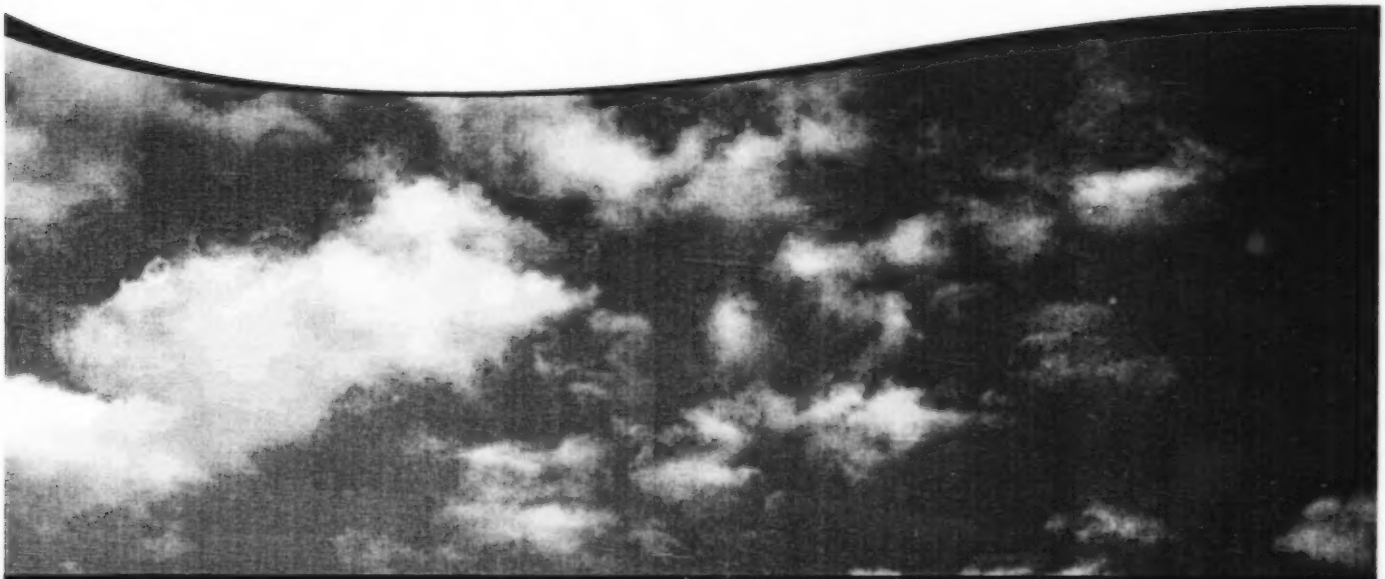
What Can We Do?

Citizens can assist in the effort of improving air quality and reducing green house gas emissions through:

- Energy conservation.
- Purchasing major and small appliances recognized as ENERGY STAR® products.
- Reduce vehicle emissions through alternate transportation methods (public transit, car pooling, walking, cycling) and adopting a no-idle philosophy.
- Proper disposal of hazardous materials.

TARGET

Achieve Air Quality Health Index Rating of Low Health Risk, 100 per cent of the time



Your comments on this Community Environmental Roadmap
will help us to continually improve future reports

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